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EXAMINER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RICHARD VOGELE, MICHAEL WAGNER,
and MARTIN KEATING

Appeal 2015-005934
Application 12/084,919¹
Technology Center 3655

Before JENNIFER D. BAHR, LEE L. STEPINA, and ANTHONY
KNIGHT, *Administrative Patent Judges*.

KNIGHT, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeals under 35 U.S.C. § 134 from a rejection of claims 14–18, 20, and 33.² Claim 14 is independent. We have jurisdiction under 35 U.S.C. § 6(b). We REVERSE.

¹ According to Appellants, BorgWarner Inc., is the real party in interest. (Appeal Br. 4).

² In the Examiner's Answer, the Examiner withdrew the rejection of claims 14–18, 20, 22, 33, 34 under 35 U.S.C. 103 (a) over Robbins and Mannino, and the nonstatutory double patenting rejections of claims 14–18, 20, 22, 33, and 34. Ans. 2–3.

THE CLAIMED SUBJECT MATTER

The claims are directed to a segmented and laminated core steel plate for single and/or double sided wet clutch plates or separator plates. Claim 14, reproduced below, is illustrative of the claimed subject matter:

14. A core plate for supporting an oil lubricated friction material comprising: a first plate formed of more than one arcuate segment, each arcuate segment having a first end and a second end, the segments being secured together with the first end of one segment being secured to the second end of an adjacent segment, the first plate having an outer surface upon which a first friction material is positioned and an inner surface; a second plate formed of more than one arcuate segment having a first surface and a second surface, the first surface of the second plate positioned adjacent the inner surface of the first plate; the second plate missing at least a portion of one segment; and a third plate formed of more than one arcuate segment, each arcuate segment having a first end and a second end, the segments being secured together with the first end of one segment secured to the second end of an adjacent segment, the third plate having an outer surface upon which a second friction material is positioned and an inner surface that is positioned adjacent the second surface of the second plate whereby at least one channel in the radial direction is formed by the at least one portion of one segment that is missing from the second plate that allows oil used to lubricate the first and the second friction materials to flow into the interior of the core plate to remove heat from the core plate, the channel defined by at least the inner surface of the first plate and the inner surface of the third plate.

Appeal Br. 43 (Claims Appendix).

REJECTION

In the Final Office action (dated June 18, 2014) the Examiner rejected claims 14–18, 20, and 33 under 35 U.S.C. §103(a) as being unpatentable

over Mannino, Jr. (US 4,674,616, iss. June 23, 1987, hereinafter “Mannino”) and Kinoshita et al. (US 2005/0167215 A1, pub. Aug. 4, 2005, hereinafter “Kinoshita”).

OPINION

As described in the Specification, “[a]nnular friction rings or discs are conventionally used in wet clutch packs.” Spec. 1:14. “A friction plate or disc normally consists of an annular steel ring or plate, which serves as a core plate and a pair of annular friction facings [] are riveted or otherwise secured to the core plate.” *Id.* at 1:18–21. Below are reproduced Appellants’ Figures 7 and 8 illustrating the construction of the plate, “having a stack of core plates formed of multiple segments.” *Id.* at 9:31.

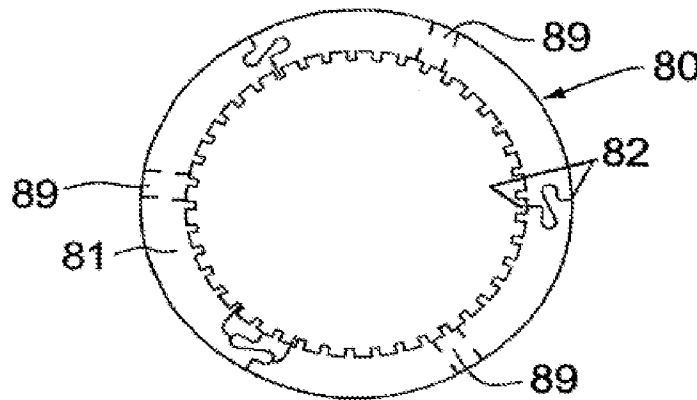


FIG. 7

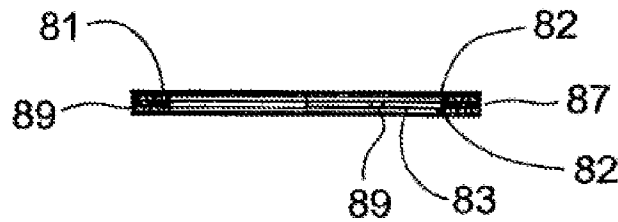
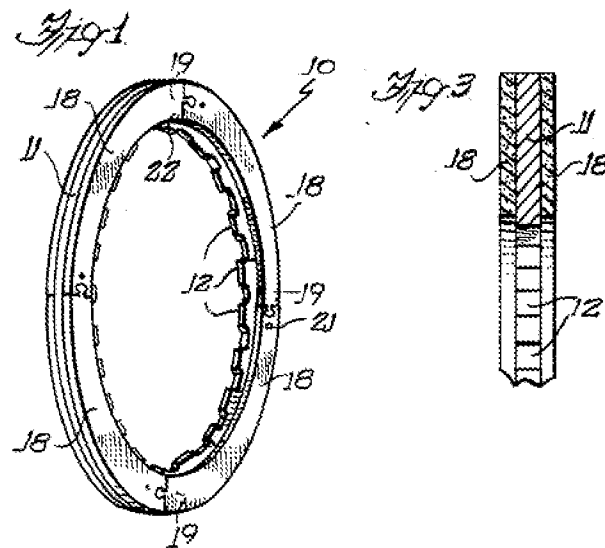


FIG. 8

As Figure 8 illustrates, the invention includes a “first core plate 81 and a second core plate 83 with the first and second core plates having multiple segments. An interior core plate 87 is positioned between the first and second core plates.” *Id.* at 9:31–10:3. “[A]t least one segment is missing on the interior core plate 87 [to form] at least one channel 89,” to allow “lubrication fluid . . . to flow through the friction disk.” *Id.* at 10:5–8. The friction facing material is secured to the exterior surfaces of plates 81 and 83 to complete the friction ring or disc. *Id.* at 1:19–21.

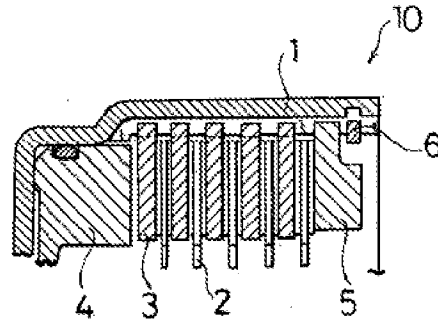
The Examiner found, in the Final rejection, that Mannino teaches a core plate having first and third plates 18 and a second plate 11 positioned adjacent the first and second plates. Final Act. 3–4. As found by the Examiner, Mannino’s friction materials 18 would constitute the first and third plates. Mannino Figures 1 and 3 are reproduced below.



Mannino, Figures 1 and 3 above, illustrate the core plate 11 and friction material 18. The Examiner found that claim 14's recitation that the first and third plates have outer surfaces "upon which [the] friction material (adjacent core plate or piston) is positioned," reads on the embodiment of Figures 7 and 8 of Mannino. *Id.* at 4. As stated by the Examiner, "[s]upport of one member on another is not required for the two members to be *positioned* with respect to each other." Ans. 4. The Examiner further found that the "core plate (one of the core plate 2 composed of two [friction] lining layers (25, 25, forming equivalent first and third plates) surrounding a central plate layer (21, forming equivalent second plate)) is interleaved with friction materials (3 or 5) on either side of the core plate." *Id.* at 5. The Examiner elaborated that "[f]riction materials, equivalent to friction materials (3 or 5) of Kinoshita, must inherently be present in a clutch comprising the core plate of Mannino, since the clutch of Mannino would cease to be a clutch without additional friction materials." *Id.* The Examiner explained that "[u]nder the broadest reasonable interpretation, 'plate' may be defined as a flat, thin sheet or strip of material, or alternatively as a cover. Segments 18 of Mannino are

flat strips of material.” *Id.* at 6. A copy of Figure 1 of Kinoshita is provided below to illustrate the construction of Kinoshita’s invention.

FIG. 1



Appellants argue that “The rejection of claims 14–18, 20 and 33 relies on a fundamental mischaracterization of Kinoshita et al. and Mannino, Jr. with regard to friction material. . . .The Examiner incorrectly uses Kinoshita et al. for the conclusion that a ‘separator plate 3 is also friction material.’” Reply Br. 4. According to Appellants, “Kinoshita et al. does not suggest that the separator plate is a friction material.” *Id.* Appellants urge that Kinoshita’s “separator plates 3 separate friction plates 2, thereby separating the friction linings,” and, thus, they would also separate the first and third plates (friction plates 18 of Mannino, Jr.), from a friction material.” *Id.* Appellants emphasize that “[c]laim 14 specifies a friction material, not a friction member,” and contend that separator plates 3 nor backing plate 5 of Kinoshita (relied on by the Examiner to support the position that a friction material must inherently be positioned upon segments 18 of Mannino) “are not described as friction material.” *Id.* at 4–5.

Based on our review of Kinoshita, Appellants’ characterization of the teachings of Kinoshita is correct. Kinoshita describes friction plates 2 as

being formed of a metal core plate with friction linings bonded to opposite surfaces thereof. Kinoshita, para. 4. We do not find, and the Examiner does not point to, any similar description of separator plates 3 or backing plate 5. Thus, even accepting that materials equivalent to plates 3 or 5 of Kinoshita must inherently be present in a clutch comprising the core plate of Mannino, as the Examiner posits, Kinoshita does not support the Examiner's position that such a construction would comprise *friction material*, as understood by those of skill in the art, positioned upon outer surfaces of Mannino's plates 18.

For the above reasons, the Examiner does not establish by a preponderance of the evidence that the subject matter of independent claim 14, or claims 15–18, 20 and 33 depending therefrom, would have been obvious. With respect to independent claim 22, which, like claim 14, also requires first and third plates each formed of more than one arcuate segment and having an outer surface upon which a friction material is positioned, the Examiner adds only that “the segments that form the first and third plates are identical.” Final Act. 8. The Examiner's conclusion of obviousness of the subject matter of independent claim 22, as well as claim 34 depending therefrom, is predicated in part on the same unsupported findings with respect to separator plates 3 or backing plate 5 of Kinoshita being formed of friction material. As such, the Examiner likewise fails to establish by a preponderance of evidence that the subject matter of claims 22 and 34 would have been obvious. Accordingly, we do not sustain the rejection of claim 14–18, 20 and 33 under 35 U.S.C. § 103(a) as unpatentable over Mannino and Kinoshita.

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DECISION

For all of the reasons as stated above, we reverse the rejection of claim 14–18, 20 and 33 under 35 U.S.C. § 103(a).

REVERSED